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EXAMINER

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ART UNIT PAPER NUMBER

2627

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/719,226	<b>Applicant(s)</b> COOKSON ET AL.	
	<b>Examiner</b> Nathan Danielsen	<b>Art Unit</b> 2627	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application-                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/28/04 and 08/04/05</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. Claims 1-20 are pending.

#### ***Drawings***

2. The drawings are objected to because: the output of buffer 132 in figure 2 lacks the appropriate label, such as the label "DATA OUT" shown in figure 3, and figure 11 has two elements both indicating that data from Side A is being sent to the processor when one should indicate that data from Side B is also being sent to the processor as well as two broken lead lines.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Specification***

3. The disclosure is objected to under 37 CFR 1.78(a)(2)(i) because of the following informalities: the listing of related applications contains only application titles without the corresponding application serial numbers. Appropriate correction is required.

***Claim Objections***

4. Claim 5 is objected to because the comma should be changed to -- and--. Claim 8 is objected to because "side" in line 2 should be --sides--. Claim12 is objected to because "one a first and second algorithms" in line 2 should be --one of a first algorithm and a second algorithm--. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3, 13, 14, and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 is drawn to a single laser head capable of being switched from one side of a disc to the other. Claim 3 is drawn to two laser heads, one positioned on each side of the disc. Since claim 3 is dependent on claim 2 and includes all limitations thereof, it is unclear, in light of the specification, how one head would be switched from the first side of the disc to the second side to a location where the second laser head is already located. For purposes of examination, this claim will be treated as though it was dependent on claim 1.

Claim 13 is rejected as being indefinite because the limitation "reversing said information in time" is unclear. The examiner suggests changing this limitation to --reversing said information in the time domain-- in order to be consistent with the specification. Claim 14 is rejected as being dependent on an indefinite claim.

Claim 17 recites the limitation "said first disc" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claims 18-20 are rejected as being dependent on an indefinite claim.

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***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States; or

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Winter (US Patent 6,603,714).

Regarding claim 1, Winter discloses a method of reading from data on a double-sided optical disc having, comprising:

rotating the disc (col. 3, lines 6-13);

reading data from the lead-in area of the first side to the lead-out area of said first side (col. 3, lines 20-29); and

reading data from the lead-in area of said second side to the lead-out area of said first second side, data being read from the first and the second sides without stopping the disc (col. 3, lines 20-29 and col. 4, lines 45-54).

Regarding claim 2, Winter discloses where data are read using a single laser head, said laser head being switched from one side to the other without stopping the disc (figure 4).

Regarding claim 3, Winter discloses where data are read using two laser heads disposed adjacent to a respective side of the disc, wherein one laser head is used to read data from one side and another laser head is used to read data from the second side (figure 3).

9. Claims 8, 11, 12, 17, 18, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishibashi et al (PCT Publication WO 01/18798; note that citations for this reference come from English

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language equivalent US Patent 6,850,478 (hereinafter Ishibashi), which resulted from the 35 U.S.C. 371 National Stage filing of WO 01/18798).

Regarding claim 8, Ishibashi discloses a method of reading data from a double-sided disc, said data being arranged in spirals on the respective side of the disc, comprising:

- rotating the disc in a first direction (inherent in the method of figure 4C);
- attempting to read data from one side of the disc (steps S101 and S102); and
- rotating the disc in a second direction if the attempt fails (No output of step S102).

Regarding claim 11, Ishibashi discloses where the method further comprises detecting the direction in which data is disposed on the disc (step S102 in figure 4C).

Regarding claim 12, Ishibashi discloses where said detection includes detecting information from the disc and using one of a first and a second algorithms to convert the information into data, said first algorithm corresponding to data being disposed in a first direction and the second algorithm corresponding to data being disposed in a second direction (col. 7, lines 26-37 and figure 4).

Regarding claim 17, Ishibashi discloses an apparatus for reading data from a double-sided disc comprising:

- a read head disposed adjacent to one side of the disc (optical head 2 in figure 3);
- a motor assembly adapted to rotate the disc in a first direction (motor 10); and
- a controller adapted to collect information from said first disc and to attempt to convert said information into data to determine if said disc is rotating in the right direction (combination of copy information determination section 4, information reproduction section 3, and disk type identification section 6).

Regarding claim 18, Ishibashi discloses where said controller controls said motor assembly, said controller being adapted to reverse the rotation of the motor assembly if information cannot be converted into data (figure 3 and step S103 in figure 4C).

Regarding claim 20, Ishibashi discloses where said controller applies a first algorithm to said information, said first algorithm being associated with a first direction of rotation (col. 7, lines 26-37 and figure 4).

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winter, in view of Ishibashi.

Regarding claim 4, Winter discloses everything claimed, as applied to claim 1. However, Winter fails to disclose where the method further comprises attempting to read data from one side of the disc, and if the attempt is unsuccessful, then reversing the rotation of the disc.

In the same field of endeavor, the background of Ishibashi discloses attempting to read data from one side of the disc, and if the attempt is unsuccessful, then reversing the rotation of the disc (figure 4C; where the successful read of the disc of Ishibashi is contingent upon the detected direction of sync marks).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method/apparatus of Winter with the functionality of Ishibashi, for the purpose of properly identifying the disc (col. 7, lines 33-37).

Regarding claim 5, Winter discloses everything claimed, as applied to claim 4. However, Winter fails to disclose where the method further comprises collecting information from the disc while the disc is rotating in a first direction and determining if the information can be converted into data.

In the same field of endeavor, Ishibashi discloses where the method further comprises collecting information from the disc while the disc is rotating in a first direction (steps S101 and S102 in figure 4C) and determining if the information can be converted into data (step S102).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method/apparatus of Winter with the functionality of Ishibashi, for the purpose of properly identifying the disc (col. 7, lines 33-37).

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Regarding claim 6, Winter discloses everything claimed, as applied to claim 5. However, Winter fails to disclose two separate algorithms for reading data based on the direction of rotation of the disc.

In the same field of endeavor, Ishibashi discloses where the method further comprises using a first algorithm on said information, said first algorithm being structured to convert information into data when said disc is rotating in the first direction, and if the attempt is unsuccessful, then converting the information using a second algorithm associated with the disc rotating in a reverse direction (col. 7, lines 26-37 and figure 4; where the successful read of the disc of Ishibashi is contingent upon the detected direction of sync marks).

Regarding claim 7, Winter discloses everything claimed, as applied to claim 5. Additionally, Winter discloses where the information is reversed in the time domain if it cannot be converted into data (col. 4, lines 10-25).

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Hisakado et al (US Patent 5,406,534; hereinafter Hisakado).

Regarding claim 9, Ishibashi discloses everything claimed, as applied to claim 8. However, Ishibashi fails to disclose where the disc has spirals on each side that are mirror images, comprising reading data from either side of the disc without reversing or removing the disc.

In the same field of endeavor, Hisakado discloses where the disc has spirals on each side that are mirror images, comprising reading data from either side of the disc without reversing or removing the disc (figures 3A and 3B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the data structure of the disc of Hisakado in the apparatus of Ishibashi, for the purpose of simultaneously reading from and writing to both sides of a double-sided disc (abstract).



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13. Claims 10, 13-16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishibashi, in view of Winter.

Regarding claim 10, Ishibashi discloses everything claimed, as applied to claim 8. However, Ishibashi fails to disclose where the disc is double-sided and must be rotated in opposite directions for data to be read from both sides.

In the same field of endeavor, the background of Winter discloses where the data is arranged in spirals oriented in the same direction as viewed from the respective side of the disc, comprising reading data from one side while the disc is rotating a first direction and reading data from the second side as the disc is rotated in the opposite direction (col. 1, lines 24-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided modified the functionality of the method/device of Ishibashi with the functionality of the background of Winter, for the purpose of reproducing data in a chronological order (col. 1, lines 35-40).

Regarding claims 13,14, and 19, Ishibashi discloses everything claimed, as applied to claims 11 and 17. Additionally, Ishibashi discloses where said step of detecting includes detecting information from the disc, attempting to convert said information to data, and if the attempt fails, reversing said information in time.

In the same field of endeavor, Winter discloses where said step of detecting includes detecting information from the disc, attempting to convert said information to data, and if the attempt fails, reversing said information in the time domain and attempting to convert the reversed information into data (col. 4, lines 10-25; where any attempt to convert the information to data without first reversing the information would inherently fail).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the functionality of the device/method of Ishibashi with the functionality of the device of Winter, for the purpose of reading data from the second side of a double-sided disc without having to reverse the direction of rotation of the spindle motor (col. 2, lines 52-55).

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Regarding claim 15, Ishibashi discloses everything claimed, as applied to claim 8. However, Ishibashi fails to disclose where the method further comprises rotating the disc in said first direction if information from one side is converted into data, and rotating the disc in the same direction to read data from the second side.

In the same field of endeavor, Winter discloses where the method further comprises rotating the disc in said first direction if information from one side is converted into data, and rotating the disc in the same direction to read data from the second side (col. 3, lines 36-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the functionality of the device/method of Ishibashi with the functionality of the device of Winter, for the purpose of reading data from the second side of a double-sided disc without having to reverse the direction of rotation of the spindle motor (col. 2, lines 52-55).

Regarding claim 16, Ishibashi discloses everything claimed, as applied to claim 8. However, Ishibashi fails to disclose where the method further comprises rotating the disc in said first direction if information from one side is converted into data and rotating the disc in the opposite direction to read data from the second side.

In the same field of endeavor, the background of Winter discloses where the method further comprises rotating the disc in said first direction if information from one side is converted into data and rotating the disc in the opposite direction to read data from the second side (col. 1, lines 24-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided modified the functionality of the method/device of Ishibashi with the functionality of the background of Winter, for the purpose of reproducing data in a chronological order (col. 1, lines 35-40).

#### ***Closing Remarks/Comments***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Daniels whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM Eastern Time.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen  
10/25/2006

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PRIMARY EXAMINER